REMARKS

Claims 1-3 and 5-21 are pending in this application. By this amendment, Applicant amends claim 1.

Claims 1, 2 and 6-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kwon et al. (U.S. 6,278,178) in view of Hata et al. (U.S. 6,383,835). And claims 3, 5 and 9-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kwon et al. in view of Ogihara et al. (U.S. 4,764,232), and further in view of Hata et al. Applicant respectfully traverses these rejections.

Claim 1 has been amended to recite:

> "An electronic component comprising:
> a member having first and second main surfaces disposed opposite to each other, and four side surfaces connecting the first and second main surfaces, at least one of the side surfaces being provided with a recess portion extending from the first main surface to the second main surface; and
> a plurality of external terminal electrodes provided in the recess portion; wherein
> **a plurality of concavities are provided in the recess portion, the external terminal electrodes are arranged so as to completely fill the concavities, and surfaces of the plurality of external terminal electrodes have a common flat surface with a surface of the recess portion; and**
> **said plurality of external terminal electrodes are defined by split via hole conductors which extend in a direction that is substantially parallel to respective side surfaces of said member.**" (Emphasis added)

Claim 9 recites:

> "A method of producing an electronic component comprising the steps of:
> preparing a ceramic green molded product having a plurality of terminal conductors, the plurality of the terminal conductors extending in the thickness direction over at least a portion of the thickness thereof;
> forming a via-hole having an elongated cross section along a line on which a plurality of the terminal conductors of the ceramic green molded product are arranged, the via-hole piercing the ceramic green molded product between first and second main surfaces thereof opposite to each other, wherein a portion of each of the plurality of the terminal

conductors is exposed at the via-hole;

firing the ceramic green molded product to obtain a ceramic sintered product; and

splitting the ceramic sintered product along a splitting line passing through the via-hole, wherein the terminal conductors exposed on the inner wall of the via-hole are arranged in a recess portion formed by splitting the via-hole, such that the entire exposed portion of each of the plurality of terminal conductors defines a common flat surface with a surface of the recess portion, and the ceramic electronic component is divided." (Emphasis added)

The Examiner acknowledged that Kwon et al. fails to teach or suggest external terminal electrodes that are arranged so as to completely fill the concavities and surfaces of the plurality of external terminal electrodes have a common flat surface with a surface of the recess portion. However, the Examiner alleged that Hata et al. teaches an electronic component wherein the external terminal electrodes are arranged so as to completely fill the concavities and surfaces of the plurality of external terminals electrodes have a common flat surface with a surface of the component. Thus, the Examiner concluded that it would have been obvious "to have completely filled the concavities as taught by Kwon et al. so that an external circuit can be electrically connected, the concavities serving as external connection terminal[s]." Applicant respectfully disagrees.

The Examiner alleged that the motivation to combine the teachings of Hata et al. with Kwon et al. would have been "so that an external circuit can be electrically connected." This is clearly incorrect because the structure of Kwon et al. already provides conductive metal films 13a which enable the electronic component of Kwon et al. to be electrically connected to an external electrode. Thus, there would have been absolutely no motivation to have completely filled the concavities of Kwon et al., as alleged by the Examiner.

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. In re Geiger, 815 F.2d 686, 2 USPQ 1276, 1278 (Fed. Cir. 1987). The Examiner has failed to establish a prima facie case of obviousness since

the references offer no suggestion of the claimed combination. See In re Nielson, 816 F.2d 1567, 2 USPQ 2d 1525, 1528 (Fed. Cir. 1987).

At best, the Examiner's comments regarding obviousness amount to an assertion that one of ordinary skill in the relevant art would have been able to arrive at Applicant's invention because he had the necessary skills to carry out the requisite process steps. This is an inappropriate standard for obviousness. That which is within the capabilities of one skilled in the art is not synonymous with obviousness. See Ex Parte Levengood, 28 USPQ 2d 1300 (Bd. Pat. App. & Inter. 1993). The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. In re Gordon, 221 USPQ 1125 (Fed. Cir. 1984). As noted above, the prior art clearly teaches away from the combination proposed by the Examiner, instead of suggesting the combination.

In addition, as clearly seen in Figs. 13B-15 and disclosed in col. 6, line 59 through col. 7, line 15 of Hata et al., the conductive material 13a is filled into the through hole **after** the via hole conductor 2a of the circuit 2 is already provided in the through holes. Thus, the conductive material is a separate and distinct element from the via hole conductor 2a, and cannot be fairly construed as being "defined by split via hole conductors which extend in a direction parallel to respective side surfaces of said member" as recited in the present claimed invention.

Ogihara et al. is relied upon merely to teach external terminals which extend from a first main surface towards a second main surface but do not reach the second main surface. Ogihara et al. clearly fails to teach or suggest "the external terminal electrodes are arranged so as to completely fill the concavities, and surfaces of the plurality of external terminal electrodes have a common flat surface with a bottom surface of the recess portion" and the step of "splitting the ceramic sintered product along a splitting line passing through the via-hole, wherein the terminal conductors exposed on the inner wall of the via-hole are arranged in a recess portion formed by splitting the via-hole, such that **the entire expos d portion of each of the plurality of terminal conduct rs d fines a common flat surfac with a surface of the r c ss portion**" (emphasis

added) as recited in the present claimed invention.

Thus, Applicant respectfully submits that Ogihara et al. fails to cure the deficiencies of Kwon et al. and Hata et al. described above.

Accordingly, Applicant respectfully submits that Kwon et al., Hata et al. and Ogihara et al., applied individually or in combination, fail to teach or suggest the unique combination and arrangement of elements and method steps recited in claims 1 and 9 of the present application, respectively.

Claim 15 recites:

> "The method of producing an electronic component comprising the steps of:
> preparing a ceramic green molded product having first and second main surfaces disposed opposite to each other;
> forming a via-hole having an elongated cross section which pierces the ceramic green molded product between the first and second main surfaces;
> firing the ceramic green molded product to obtain a ceramic sintered product;
> **forming a plurality of external terminal electrodes on the ceramic green molded product or the ceramic sintered product so as to be arranged on the inner wall of the via-hole after the step of forming the via hole**; and
> **splitting the ceramic sintered molded product along a split line passing through the via-hole, wherein the plurality of the external electrodes formed on the inner wall of the via-hole are arranged in a recess portion formed by splitting the via-hole.**" (Emphasis added)

The Examiner alleged that Kwon et al. teaches all of the method steps and features recited in claim 15, except for each of the plurality of external terminal electrodes being arranged so as to extend from the first main surface to a second main surface but not reaching the second main surface. The Examiner further alleged that Ogihara et al. teaches an electronic component wherein each of a plurality of external terminal electrodes are arranged so as to extend from a first main surface towards a second main surface but not reaching the second main surface. Thus, the Examiner concluded that it would have been obvious "to have arranged the terminal electrodes as taught by Ogihara et al. in the device as taught by Kwon et al. for the purpose of

facilitating electrical connectivity between the different layers of the substrate." Applicants respectfully disagree.

In contrast to the present claimed invention, Kwon et al. teaches a method of manufacturing an electronic component in which via holes 13 are formed in the substrate 11, a conductive material is coated on the peripheral surfaces of the of the via holes 13 to define external terminals 13a, and **after the external terminals have been formed**, a routing process is performed along an imaginary vertical center line of the via holes 13 to form elongated via holes in the substrate 11 (see Figs. 13-15 and col. 4, lines 39-62 of Kwon et al.). Thus, the step of forming the external terminals is performed **before** the step of forming the via hole having an elongated cross section, **NOT after** the step of forming the via hole having an elongated cross section. Therefore, Kwon et al. clearly fails to teach or suggest "forming a plurality of external terminal electrodes on the ceramic green molded product or the ceramic sintered product so as to be arranged on the inner wall of the via-hole **after the step of forming the via hole"** as recited in claim 15 of the present application.

In the outstanding Office Action, the Examiner has completely failed to respond to any of the arguments with respect to claim 15 and the teachings of Kwon et al. which were presented in the Amendment of March 6, 2003. Since the Examiner has not fully responded to these arguments, Applicant respectfully requests reconsideration and withdrawal of the finality of the outstanding Office Action.

Ogihara et al. is relied upon merely to teach external terminals which extend from a first main surface towards a second main surface but does not reach the second main surface. Ogihara et al. clearly fails to teach or suggest "forming a plurality of external terminal electrodes on the ceramic green molded product or the ceramic sintered product so as to be arranged on the inner wall of the via-hole **after the step of forming the via hole**" as recited in claim 15 of the present application.

Thus, Applicant respectfully submits that Ogihara et al. fails to cure the deficiencies of Kwon et al. described above.

Accordingly, Applicant respectfully submits that Kwon et al., Ogihara et al. and

Hata et al., applied individually or in combination, fail to teach or suggest the unique combination and arrangement of method steps recited in claim 15 of the present application.

In view of the foregoing amendments and remarks, Applicant respectfully submits that claims 1, 9 and 15 are allowable. Claims 2, 3, 5-8, 10-14 and 16-21 depend upon claims 1, 9 and 15, and are therefore allowable for at least the reasons that claims 1, 9 and 15 are allowable.

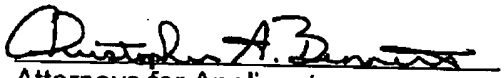
In view of the foregoing Remarks, Applicant respectfully submits that this Application is in condition for allowance. Favorable consideration and prompt allowance are respectfully solicited.

To the extent necessary, Applicant petitions the Commissioner for a Two-month extension of time, extending to September 30, 2003, the period for response to the Office Action dated April 30, 2003.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Date: September 30, 2003



Attorneys for Applicant

Joseph R. Keating
Registration No. 37,368

Christopher A. Bennett
Registration No. 46,710

KEATING & BENNETT, LLP
10400 Eaton Place, Suite 312
Fairfax, VA 22030
Telephone: (703) 385-5200
Facsimile: (703) 385-5080